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ABSTRACT

This research sought to gain an impression of the use of the Internet by school librarians in the United Kingdom and South Africa. The research questions addressed the issues of access to the Internet by school librarians, the purposes for which school librarians used e-mail and the World Wide Web, the demand from teachers for access to the Web, the key issues identified by school librarians in relation to the use of the Internet in schools in the next five years, and any differences between the responses of librarians from the two countries. The key findings were that there was limited access to the Internet in the respondents' schools; school librarians used the Web mainly for curricular material; science and geography departments were the heaviest users of the Web; and the key future issues identified included information skills, cost, inservice training, and the role of the school librarian. There were no significant differences between the two countries studied. (Contains 10 references.) (Author/MES)

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The Use of the Internet in School Libraries

An International and Comparative Survey

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This research sought to gain an impression of the use of the Internet by school librarians in the United Kingdom and South Africa. The research questions addressed the issues of access to the Internet by school librarians, the purposes for which school librarians used email and the Web, the demand from teachers for access to the Web, the key issues identified by school librarians in relation to the use of the Internet in schools in the next five years, and any differences between the responses of librarians from the two countries. The key findings were that there was limited access to the Internet in the respondents' schools; school librarians used the Web mainly for curricular material; science and geography departments were the heaviest users of the Web; and the key future issues identified included information skills, cost, inservice training, and the role of the school librarian. There were no significant differences between the two countries studied.

Introduction

The availability of the Internet and especially the World Wide Web (Web) in schools across the world has transformed access to curriculum-related information resources. In all of the developed countries, governments are investing heavily in providing schools with access to the Internet with initiatives such as the United Kingdom's "National Grid for Learning" (Department for Education and Employment, 1997) which will ensure that by the year 2002, all schools will be broadband connected to the Internet and all teachers and pupils will have their own email addresses and file space. This vast increase in the availability of electronic information resources can be seen as both an opportunity and a threat for school librarians. The opportunity is to manage this new information resource to enrich the school curriculum and to be a key player in the school's Information Technology (IT) development. The threat lies in the possibility that the school librarian will NOT be seen as an important contributor to the school's effective use of IT and will be marginalized.

Writers such as Herring (1998), Clyde (1997), Kulthau et al. (1997), Valauskas and Ertel (1996) have identified a range of issues that affect the use of the Internet in school libraries including: teaching information skills in relation to use of the Web, integrating use of the Web into the school curriculum, evaluating websites, acceptable use policies, censorship and the Web, and the use of email and listservs. There is also an increasing number of articles relating to the use of the

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Internet in journals such as *Emergency Librarian* [now *Teacher Librarian*], *School Library Media Quarterly* [now replaced in part in print by *Knowledge Quest* and in part online by *School Library Media Research* <http://www.ala.org/aasl/SLMR/index.html>] and *School Libraries Worldwide*. An increasing range of educational periodicals across the world also deal with issues relating to the Internet, often in the form of an IT column. There is, therefore, no shortage of opinion on how the Internet should be used in schools and a range of case studies can be found in journals such as the United Kingdom's *Computers don't bite*.

There have been surveys of Internet use by schools and school librarians but many of these remain unpublished. The present survey was undertaken to gain an impression of what could be considered as the state of the art situation in two countries. The value of this study lies not only in the quantitative and qualitative data which emerged from analysis of the questionnaire responses but in the issues that it highlights, the comparison with existing literature, and the possible future use of a similar study in the countries covered here as well as in other countries.

Research Questions

The purpose of this study was to examine the use of the Internet by school librarians in the United Kingdom (UK) and in South Africa (SA). The study sought to focus on the following research questions :

- What kind of access did school librarians have to the Internet?
- To what extent and for what purposes did school librarians use email and the Web?
- What was the demand from teachers for access to the Web?
- What did school librarians identify as the key issues in the use of the Internet in the next 5 years?
- Were there any significant differences between the two countries studied?

Scope of the study and sampling

The original intention of this study was to survey UK school librarians attending the annual School Libraries Group (SLG) conference in Cambridge in April 1998, as the delegates represented a sample of the total school librarian population in the UK. The inclusion of the South African school librarians followed an invitation to the author to be the keynote speaker at the biennial Independent Schools Conference in Johannesburg in April 1998. This provided an opportunity to compare results from both countries in order to identify similarities and differences. The survey aimed to cover school librarians' access to the Internet and their use of email and the Web.

Using the delegates at the two conferences can be viewed as studying a sample of school librarians in both the UK and South Africa and *may* allow some generalizations to be made. Bouma and Atkinson argue that "the manner in which the sample is drawn determines to what

extent we can generalize from findings" (Bouma and Atkinson, 1995, p. 138). This author's approach can be seen as using purposive sampling, and Bouma and Atkinson state that purposive sampling is appropriate where researchers "using their own judgement and intuition" select appropriate groups to be studied. However, they caution that "if a purposive sample is studied, only tentatively suggested generalisations can be made" (Bouma and Atkinson, 1995, p. 143). It is important to recognize that the school librarians attending both conferences are not necessarily a representative sample of the total population of school librarians in each country for the following reasons:

- While the UK sample contains school librarians from both the state and independent sector, those attending the annual SLG conference could be viewed as non-typical in that conference attendees may be seen as more motivated and more initiative driven and therefore more likely to have gained Internet access in their schools. In the author's experience, delegates at this conference *do* represent a fair cross section of the UK school librarian population in that the conference delegates come from a range of well-funded, moderately-funded, and poorly funded schools.
- The South African conference consisted almost entirely of school librarians from independent schools, all of which are well funded in relation to technology. Thus the South African sample can be seen as representing a fair cross section of South African *independent* school librarians but not as a sample of South African school librarians as a whole.

Methodology

The author chose to issue a questionnaire to delegates at both conferences. To ensure a high response, delegates filled in the questionnaire immediately after it was issued. Authors such as Czaja and Blair (1996), Alreck and Settle (1995) and Fink (1995) identify the use of questionnaires as a sound research method for gaining information from a defined population. The analysis of the responses was done using Pinpoint, and the results are presented in narrative and tabular form.

Results

The research questions posed above provided the basis for analyzing the results, with comparisons between the two countries made where appropriate. Tables are used to illustrate findings in relation to some topics.

What kind of access did school librarians have to the Internet?

The results showed that 93% of UK and 87% of South African (SA) schools had access to the Internet and those who did not have access expected to be connected within one year. However as shown in Table 1, the very high percentage access rates for the schools were not matched by very high access from the school library:

Table 1: Internet access in the school library			
Country	Yes %	No %	No answer %
UK	64	27	8
SA	61	30	9

School librarians in this survey had access to email and the World Wide Web (WWW) and also to other online services, as shown in Table 2.

Table 2: Access to email, WWW and other online services				
Country	Email %	WWW %	Others %	No answer %
UK	75	82	16	16
SA	78	72	7	20

The online services which were accessed by only a small percentage of respondents included *Reuters, FT Profile, Britannica Online* in the UK and *Reuters, Sabinet* and *Britannica Online* in South Africa.

In relation to use of the Internet in the school as a whole, there were very similar responses by both sets of librarians, and it is interesting to note that a much smaller percentage of administrative staff in schools had access than senior management, teachers and pupils, as shown in Table 3.

Table 3: Access to the internet in the school					
Country	Senior Mgt %	Teachers %	Admin Staff %	Pupils %	No answer %
UK	71	77	59	77	15
SA	72	80	57	80	20

Access to the Internet is a very recent phenomenon in both UK and SA schools. Table 4 shows that most schools had no access before 1996 and only in 1997 did a majority of the school surveyed have access.

Table 4: Year of access to the Internet								
Country	1998%	1997%	1996%	1995%	1994%	1993%	1992 and earlier %	No answer %
UK	5	37	30	4	4	4	0	16
SA	9	41	17	2	9	0	0	22

The questionnaire asked respondents to indicate who had initiated the development of access to the Internet in the school, and the results showed that school librarians were involved in gaining access in 25% of the UK respondents' schools and in 24% of the SA respondents' schools. These percentages may be higher if school librarians served on an IT/Resources committee since in both countries such a committee was identified as the initiator. These results are very encouraging in that they demonstrate that the school librarians in the schools concerned were playing a leadership role in introducing new technology.

The form of access differed between the two countries. In the UK, 60% of the respondents' schools had modem access and 15% had broadband access, whereas in the SA respondents' schools, 33% had modem access and 26% had broadband access. This difference a temporary one, however, as Table 5 shows that a significant proportion of UK respondents' schools were likely to have better access within one year. While the UK schools might narrow the difference in better access, Table 5 also shows that in most respondents' schools, there would be no improvement.

Table 5: Likelihood of improved access within one year			
Country	Yes %	No %	No answer %
UK	32	51	17
SA	4	70	26

To what extent and for what purposes did school librarians use email and the Web?

The study sought to determine the school librarians' use of the Internet not only in relation to their use of the Web but also how they used email. Email can now be viewed as a professional resource that school librarians can use for providing services to teachers and pupils as well as for contacting fellow professionals. It is certain that in the future all school librarians, teachers and pupils will have personal email addresses. Indeed, the UK's National Grid for Learning has this as one of its stated aims (Herring 1999). Table 6 shows that, at the time of the study, fewer than half UK respondents had a *personal* email address whereas the SA figure was significantly higher. The results indicated that a further 27% of UK respondents shared an email address with others as did a further 24% of SA respondents.

Table 6: Personal email addresses			
Country	Yes %	No %	No answer %
UK	38	52	10
SA	59	28	13

Table 7 shows how often the respondents checked their email, and the relatively low percentage of respondents checking their email at least once a day may be directly related to the access to email that the respondents had when the email address was shared. It may also reflect a situation where the culture of using email as a daily means of communication within and outside the school had not been established.

Table 7: How often email was checked				
Country	More than once a day %	Once a day %	Less than once a day %	No answer %
UK	32	15	40	14
SA	43	11	24	22

Respondents were asked with whom they had email contact, both within and beyond the school, and the results showed that the main contact in school for UK respondents was with teachers and senior staff, whereas for SA respondents the main contact was with pupils and teachers. These results most likely reflect the greater access to email by pupils in SA independent schools. Jervis

and Steeg (1998) reported in their study of UK schools that only 28% of pupils had access to individual email accounts.

The use of email to contact people outside the school showed that both UK and SA respondents made most contact with other school librarians. Other contacts included friends, relatives, other libraries, and commercial organizations. One of the main uses of email for school librarians in North America and Australia is to participate in listservs such as LM_NET, ATLC FORUM and OZTL_NET. The respondents to this survey did not contribute to listservs in a significant way, with only 3% of UK respondents and 17% of SA respondents stating that they used a listserv. The key reasons for this are the absence of a UK listserv for school librarians and the fact that a new listserv for SA school librarians had only been recently established. This author as set up a new listserv entitled SL_NET for UK school librarians and membership is growing steadily.

When asked about the main benefits of using email, there was general agreement amongst UK and SA respondents that the key advantages of email included speed, cost, efficiency, access, networking, convenience, duplication, easy communication, global communication, instant communication and information about the World Wide Web, and overcoming professional isolation. In relation to problems identified in the use of email, there was again general agreement amongst both UK and SA respondents in that they identified junk email, address problems, server problems, lack of response, and the time consuming nature of email use as the key issues to be explored.

The survey revealed an encouragingly wide use of Web by school librarians in both countries. Table 8 shows the purposes for which respondents used the Web:

Table 8: Use of the Web

Country	Information for yourself %	Information for teachers %	Information for pupils %	Other purposes %	No answer %
UK	62	66	66	32	26
SA	59	61	59	20	33

Respondents were asked to provide examples of use of the Web in relation to the above purposes and there was general agreement that the key uses of the Web for information for the school librarian were related to professional development, curricular topics, and books. Under "Information for teachers" respondents agreed in that all topics identified were related to curricular topics such as the industrial revolution, politics, European information, textiles and poetry for UK respondents and El Niño volcanoes, poetry, business economics, apartheid, and films for SA respondents. Information for pupils derived from the Web was also curriculum related and included topics such as environmental issues, Japanese art, salmonella, and euthanasia for UK respondents and children's authors, volcanoes, geological disasters, and river flow statistics for SA respondents.

What was the demand from teachers for access to the Web?

The survey sought to identify the use of the Web not only by school librarians but also by their teaching colleagues. Table 9 shows the extent of use by teachers in departments, and it is interesting to note that there was a significantly higher use by teachers in SA schools.

Table 9: Teachers' use of the World Wide Web in their departments			
Country	Yes %	No %	No answer %
UK	41	32	27
SA	61	13	26

Respondents were also asked to identify which departments were the heaviest users of the Web in the school in both the department and in the library. It was clear from the responses that in both the UK and SA, geography and science teachers made much more use of the Web than other teachers. Amongst other departments, business studies, languages and English were viewed as moderate users by UK respondents, as were English and history by SA respondents. The key reasons identified by both UK and SA respondents for heavier use by some departments than others were teacher enthusiasm, IT literacy and the appropriateness and currency of the information available.

Interestingly, 56% of UK respondents and 50% of SA respondents stated that there had been an increase in the use of the library by teachers as a result of Web access and that the departments whose use of the library increased included (in the UK) science, geography, modern languages, and history and (in SA) science, geography, biology, and technology. This is an encouraging response in that it indicates not only that the Web can be used by school librarians as a way of attracting teachers to the library but also that this may facilitate better integration of online and print resources.

What did school librarians identify as the key issues in the use of the Internet in the next 5 years?

The survey sought to identify the respondents' views on the future use of the Internet in UK and SA schools, especially the use of email and the Web. The questionnaire first asked how respondents saw the use of the Internet expanding in the next 5 years. There was general agreement amongst both UK and SA respondents that the use of email would greatly expand in that all staff and pupils would have personal emails, there would be much more access to email in the school as a whole and in the library in particular, there would be much more contact with other schools and school librarians, and there would be a great improvement in communication generally but especially in relation to professional contacts. There was also general agreement that the use of the Web would greatly expand because of greater access for both staff and pupils and that this would lead to greater use of Web resources in the curriculum, more emphasis on information skills, improved training for staff and the development of a school intranet.

The questionnaire then asked respondents to identify the key issues respecting the future use of the Web as an information resource. Both UK and SA respondents identified the following key issues: information skills development, the role of the school librarian as an information professional in the school, censorship, access, control, time management, and pupil supervision. UK respondents also identified demand from teachers and pupils, INSET for teachers,

establishing an intranet, IT policy development, and possible decline in library use as related issues. SA respondents identified promotion of the Web, plagiarism, support, finance, downloading, flexible learning, and management of resources as related issues. It was very clear that the issues surrounding Internet development were of great concern to the respondents as this question was answered in much more detail than any other in the questionnaire.

The key results from this survey show that, while almost all schools have Internet access, there is no Internet access in one third of school libraries, most schools access the internet via a modem, fewer than half of school librarians in the UK had a personal email address, very few school librarians in either country accessed a listserv, school librarians used the Web mainly to gain information for themselves or teachers and pupils, and that this information was curriculum related. In both countries, the geography and science departments were the heaviest users of the Web. The key issues facing school librarians in the using the Web over the next five years included teaching information skills, cost, inservice training, censorship and the future role of the school librarian as an information professional in the school. In general, there was little difference between the two countries studied.

Conclusions

This study makes a useful contribution to the research relating to Internet use in schools and in school libraries. The research questions attempted to provide evidence of Internet use by school librarians in UK secondary schools and SA independent schools. While it cannot be argued that the results can be generalised to *all* UK secondary and SA independent schools, this author would argue that the respondents represented a valid sample of the total population in each category and that therefore some general conclusions can be drawn from this study in relation to most schools in each category. The study represents a snapshot of what progress had (and had not) been made in relation to the use of the Internet by school librarians in 1998, and it clearly shows that use of the Internet in schools was patchy, with some school librarians having full access (e.g., broadband connection and personal email address) and others having limited access. Of particular interest are the views of school librarians on the expansion of Internet use in their schools and the potential problems identified. Future research in this area could either replicate this study in the countries concerned or in other countries or it could focus on the *actual* changes in Internet use by school librarians over a certain period.

Comparing the results of this survey to the existing literature, it is clear that the introduction of the Internet into schools has had a major effect on the role of the school librarian as educator and as manager of the school's information resources. It is also clear that government initiatives will radically improve access to the Internet in the future and this will lead to *more* use of the Web in the school and greater demands on the school librarian from subject teachers. It is interesting to note that the issues identified by the school librarians in this study are the same as those discussed in the literature by authors such as Herring (1999), Kuhlthau (1997), and Clyde (1997).

This survey highlights a number of key implications for school librarians. First among these is that school librarians must play a significant role in deciding how Internet resources can best be exploited in the school to complement other resources. School librarians must keep current with developments in this area by either education or inservice training. School librarians must develop and implement effect information skills programs in their schools in order to ensure that

pupils become effective Internet users. The important areas not covered by this survey relate to the development of intranets in schools and the use of instructional websites in the school curriculum.

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